

Improved Trace Gas Spectrometer, Phase I

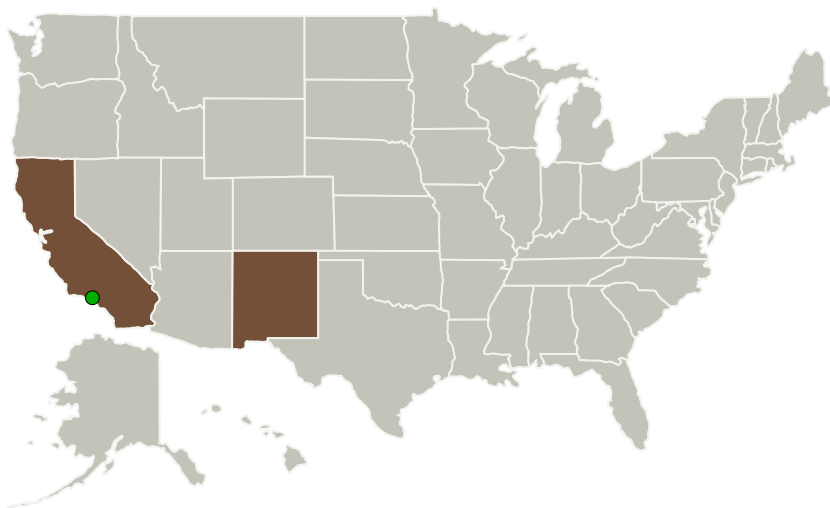
Completed Technology Project (2010 - 2010)



Project Introduction

Southwest Sciences proposes development of gas filter correlation (GFC) spectroscopy using non-periodic gratings for spaceborne and airborne deployment. Our proposed technology will result in smaller, lighter weight, lower power, and more rugged instrumentation than is possible using established GFC spectrometers. The approach is based on the development of non-periodic diffraction gratings that replace the reference gas cells used in GFC spectrometers.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
Southwest Sciences, Inc.	Lead Organization	Industry	Santa Fe, New Mexico
● Jet Propulsion Laboratory(JPL)	Supporting Organization	NASA Center	Pasadena, California

Primary U.S. Work Locations

California	New Mexico
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Project Transitions

 **January 2010:** Project Start

 **July 2010:** Closed out

Closeout Documentation:

- Final Summary Chart(<https://techport.nasa.gov/file/139102>)

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Organization:

Southwest Sciences, Inc.

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Principal Investigator:

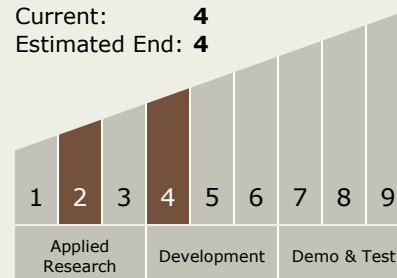
Steven Massick

Technology Maturity (TRL)

Start: 2

Current: 4

Estimated End: 4



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Technology Areas

Primary:

- TX08 Sensors and Instruments
 - └ TX08.1 Remote Sensing Instruments/Sensors
 - └ TX08.1.3 Optical Components

Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System